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Whether CEO Succession Via Hierarchical Jumps is Detrimental or Blessing in Disguise? Evidence from Chinese Listed Firms

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Abstract: *This study investigates the impact of hierarchical jumps in the CEO's succession on firms' financial performance. To contemplate deeply, hierarchical jumps have been categorized into high and low level evaluating the positive impact of high-level hierarchical jump on firms' performance. Moreover, this study has also formulated hierarchical intensity signifying the idea that despite neglecting senior board members during hierarchical jumps, still marginal increment in the firms' growth has been observed. Using panel regression technique along with 2sls instrumental regression, this research reveals that hierarchical jumps in CEOs successions are more conducive only if the incumbent CEOs are selected irrespective of age, degree or high hierarchical position within the hierarchical ladder. Lastly, this study enunciates that firms having high total assets boost their performance via hierarchical jumps emphatically.*

Keywords: CEO's succession; Hierarchical jumps; Firm's performance; Hierarchical intensity

JEL Classification: G30, G34, G39, L25

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Introduction

Since the last few decades, researchers have been analysing the different aspects of corporate governance which do impact the firms' performance. In this regard, the renowned upper echelon theory supports the concept that the characteristics and the ability of corporate governance influence the firms' growth (Hambrick, 2007; Hambrick & Mason, 1984). A humble CEO and his/her top management team are found in the United States to be associated with stronger firm performance (Ou, Waldman, & Peterson, 2018). Fewer previous studies (Guerrero-Villegas, Giráldez-Puig, Pérez-Calero Sánchez, & Hurtado-González, 2018) have unveiled that the positive role of the board between government concentration and firms' performance but the effect of the internal mechanism of the corporate board on firms' performance still requires exploration (H. W. Hu, Tam, & Tan, 2010).

Moreover, the intention of "upper echelon" also requires contemplation. In this regard, (Shen & Cannella Jr, 2002) have evaluated that "upper echelon" seek for authoritative power and this lust of power, sometimes causes hurdles for the incumbent CEO. Moreover, the circulation of power theory (Ocasio, 1994) reiterates that whenever the incumbent CEO executes orthodox strategies, the top management team confronts severely which causes his/her early departure. CEO succession occurs either regularly or irregularly and it influences the firms' performance in either way. In this regard, some studies emphasize that CEO succession does not disturb the momentum of firms' performance while (F. Hu & Leung, 2012) have alleged the CEO succession to be a hurdle for firms' profitability. Significantly, firms can appoint the successor either internally or externally depending upon the economic condition. Previous literature has assured that outsider CEOs enhance the firms' performance (He & Huang, 2011) but this type of succession is advantageous for those firms which are seeking for versatility among products or requiring innovative amelioration.

Although the effect of CEO's succession on firm performance has been extensively researched and these previous studies predominately employ the agency theory, much of them focus on firm financial performance and formal board structure, while neglecting the social performance aspect(McGuire, Dow, & Ibrahim, 2012) of informal hierarchy among directors on a firm's board(He & Huang, 2011). Will hierarchical fluctuations/jumps in CEOs succession also escalate the firms' performance? The answer requires theoretical formulation and empirical evidence.

Additionally, (Jiang, Huang, & Kim, 2013) have analysed non-routine turnover of CEO for Chinese firms concluding that high volatility firms always endorse the outsider CEO (by imposing forceful turnover on the predecessor). They have examined the high rate of succession among SOEs as compared to non-SOEs. Though some authors have also evaluated the positive relation of internal succession with the firm's

growth (Zhang & Qu, 2016) but they have neglected the internal succession via hierarchical jumps. Though simple types of the hierarchy have been already analysed which is considered to be necessary for firms' growth (He & Huang, 2011). While the impact of hierarchical jumps among board members on performance still requires contemplation.

The impact of CEO succession via hierarchical jumps has not been still evaluated comprehensively. The objective of this research paper is to assess the impact of hierarchical jumps in CEO succession on firms' performance. This study also contemplates the age and education of the successors to conclude whether these specific characteristics are necessary for the firms' profitability or not? Adhering to prior study (Zhu, Ye, Tucker, & Chan, 2016), hierarchical rank indicates the status and significance of board members among Chinese firms. Through analysing hierarchical rank and internal succession1, this research has formulated the hierarchical jumps. Comprehensively, hierarchical jumps have been categorized into low and high-level hierarchical jumps. The caveat of this categorization is to judge whether upper or low-rank officials among board members are more efficient or not when they are appointed as a CEO (He & Huang, 2011). Further, the hierarchical intensity has been constructed which contemplates the scenario when the numbers of senior board members are neglected while appointing CEO through the hierarchical jumps.

To summarize, this research contributes in several ways. Firstly, the formulation of a theoretical model for hierarchical jumps. Secondly, hierarchical jumps have been categorized into low and high level. Thirdly, the hierarchical intensity has also been constructed to evaluate the psychological aspect. Lastly, empirical models have been analysed while supporting the theoretical models.

Theoretical Framework and Hypothesis Development

Circulation of power theory describes the causes of CEO turnover. There are two main factors which lead to the early departure of the CEO. Firstly, due to the lack of cogent ideas, the CEO cannot execute innovative strategies which decelerate firms' performance quickly revealing his position vulnerable (Ocasio, 1994). Secondly, the potential of adaptability which signifies that if the CEO does not adapt himself to the dynamic environment of the organization then the opposition will challenge him which ultimately, escort him to the early turnover. The second significant theory is "Social Identity theory" (Hogg & Terry, 2000)which motivates individuals to achieve social status. This is why board members within organizational hierarchy always endeavour to achieve the apex of the top management team. Therefore, there can be an eruption of war between members of "upper echelon" after succession(Shen & Cannella Jr, 2002). The hierarchy among top management represents the status of board members(Zhu et al., 2016). Moreover, hierarchical distribution is also necessary for the firm's growth (He & Huang,

2011). Though some researchers(Daily, Certo, & Dalton, 2000; Fitza, 2014; Manner, 2010; Shen & Cannella Jr, 2002; Zhang & Qu, 2016) have reiterated that the attributes of CEOs are necessary for the firm's performance, but the survival of the novel CEO relies on his interaction with top management members and among top management team whereas the role of independent directors is pivotal. The prior research (Nanda & Onal, 2016)has witnessed that their vigilant presence is necessary for boosting the firms' growth. It has also been observed that under the surveillance of independent directors, top management turnover positively enhances the firms' growth(Shen & Lin, 2009). Meanwhile, they are the best alternative for the replacement of poor performer CEO. (Shah et al., 2019) study shows firm performance is boost due to hierarchical jumps. To summarize the above discussion, it can be assessed that hierarchical jumps in CEO succession should enhance the firms' growth under the vigilant presence of independent directors. So, the first hypothesis is:

H1: The incumbent CEO via hierarchical jump enhances the firms' growth

Successor Appointment via Low Hierarchical Order and Firm's Performance

Hierarchy is necessary for acquiring suggestions from the senior and to keep balance among all board members. Oppositely, hierarchy disintegrates the top management team by lower, middle and the upper level. The members who are ranked lower in hierarchy always seek to move forward as compared to the high level. In some organization, it has been observed that hierarchical distribution invigorates the interaction among board members which boosts the firms' performance (He & Huang, 2011). In Chinese culture, the hierarchical order is considered to be extremely significant and inspiring. One cannot imagine, even for Chinese state government meetings, seats are allocated according to the rank of officials (Zhu et al., 2016). Additionally, they have also analysed the hierarchical rank of independent directors which is found to be higher in Chinese listed companies indicating their importance in decision making. One aspect of hierarchical rank has also been described by social psychologists who have evaluated the individuals' behaviour to be dissimilar due to their different hierarchical position. Most importantly, the reason behind this distinct behaviour is owing to different motivational intensity for achieving reward (as high reward is related to the high-rank position) (Gerth & Wolff, 1950). According to the behavioural theory of motivation, reward stimulates the motivational potential (Fowles, 1987) whereas the dominant mood is assumed to reflect the strength of the underlying motivational system-i.e., strong anxiety with a strong behavioral inhibition system (which causes to strengthen the ambition. In this connection, it is the ambition of every board member to move forward in the hierarchical ladder. Hierarchical positions can be categorized into high, middle and low (Phillips & Zuckerman, 2001). Among this categorization, the low-rank board members are neglected severely (He & Huang,

2011). Conclusively, this study has observed that the low-rank d board members are enthusiastic about elevating his position. For this reason, they work hard and always endeavour to provide innovative ideas to be applauded by the senior board members. Relevant to the above, due to the dynamic behaviour of low-rank board members, it can be evaluated that if high-rank board members are replaced by low-rank board members via hierarchical jumps, then firms' growth will be accelerated vehemently. Conclusively, (Sarfraz et al., 2019) has concluded that medium hierarchical jumps invigorate the innovation but they have segregated the jumps into three categories (low, medium and high). In this regard, high hierarchical jumps should escalate the firms' growth.

H2: High hierarchical jumps (low-rank board members) in CEO succession enhance the firm's growth

Senior Deferred Officials and Firms' Growth

Prior research has contemplated the significance of hierarchy for firms' profitability(He & Huang, 2011). Moreover, no one can deny, the pivotal role of the hierarchy while executing modern strategies(T. Chen, 2015). Hierarchical rank also indicates the authoritative power through the authority which is necessary for the promulgation of new rule and regulation within the organization. In China, reliable power is highly significant, but researchers have observed that the intensity of reliable power dissimilar among officials (Hofstede, Hofstede, & Minkov, 2010). In this regard, though board members of an organization are authoritative, the intensity of authority is manifested through their hierarchical rank. Keeping this view in the same vein, among Chinese firms, the senior independent directors are mostly allocated at the higher rank position(Zhu et al., 2016)which indicates their significance and authority. They can be replaced by the CEO during firms' deceleration (Conyon & He, 2011). Significantly, it is not necessary that in all Chinese firms, board members1are allocated according to seniority (through experience or education). Due to this reason, there is a chance of error while considering the hierarchical jump[2]. So, hierarchical intensity (interaction term of several board members neglected and the total number of the hierarchical position of a successor) has been formulated which clarifies that even though senior board members are neglected, the momentum of firms' performance is not disturbed. So, the third hypothesis is given by

H3**:** *Hierarchical intensity boosts the firms' performance*.

Methods and Data Description

All Chinese listed companies (listed on Shanghai and Shenzhen stock exchange) has been selected for empirical analysis, but sample size contains only 2928 firms

(due to missing data problem) for the years 2012 to 2016. Those firms are selected which issue "A" share as it is considered that these firms are under high surveillance of foreign investors following(Zhang & Qu, 2016). This study has selected CSMAR and WIND data sources which have already been endorsed by many scholars(Jiang et al., 2013; Lo, Wong, & Firth, 2010; McGuinness, Vieito, & Wang, 2017; Xu, Chen, Xu, & Chan, 2016; Zhai & Wang, 2016; Zhang & Qu, 2016). CSMAR data Source has been preferred for the company's financial data while hierarchical jump has been evaluated by analysing the company's profile (Zhu et al., 2016).

Dependent Variables

The dependent variable is a performance which has been measured by a proxy ROA following (Fitza, 2014; Geletkanycz & Boyd, 2011; Hambrick & Mason, 1984; Manner, 2010; Zhang & Qu, 2016). Additionally, some authors (Dezsö & Ross, 2012) have endorsed Tobin's Q to measure the performance of the firm while others have endorsed market to book ratio which is also a significant measure for determining the future performance of a firm (Daily et al., 2000). Moreover, some authors (Jiang et al., 2013) have preferred EBIT/TA as a proxy for the performance (via accounting returns) while others (Bauer, Guenster, & Otten, 2004) have already researched by selecting the net profit margin as a proxy for performance.

To encapsulate, there are several options for measuring performance, but every variable has its pros and cons (Haniffa & Hudaib, 2006). Importantly, ROA is the best proxy which indicates the performance of corporate governance whereas ROI (Adjaoud, Zeghal, & Andaleeb, 2007) has also been selected as a second proxy for measuring performance.

Independent Variables

A hierarchical jump in CEO succession is a primary independent variable which has been formulated following two criteria. Firstly, there must be an internal succession. Secondly, the successor should belong to the board of directors for each firm. The previous research has revealed that among Chinese firms, the board of directors is listed according to the seniority and power status. So, if internal succession occurs then successor should be runner-up in the list (generally if Chairman is turned over then vice chairman will be the successor). Therefore, a hierarchical jump will be considered when any board member who is lower than runner-up will be appointed as a CEO forcefully. In this scenario, the dummy variable "hierarchical jumps" will be assigned value "1" (satisfying the criteria mentioned above) and any other type[3] of succession has been given "0" value. Mathematically hierarchical jumps are formulated as

$$HJ_{it+1} = \sum LHJ_{it} + HHJ_{it} \quad \text{such that} \quad LHJ_{it} \cup HHJ_{it} = 1, LHJ_{it} \cap HHJ_{it} = 0 \tag{a}$$

$$\text{Where} \quad LHJ_{it} = \begin{cases} 1 & if \quad 0 < I_{ssc}, n_p R < M_L \\ 0 & otherwise \end{cases}$$

$$HHJ_{it} = \begin{cases} 1 & if \quad 0 < I_{ssc}, \quad n_p R > M_L \\ 0 & otherwise \end{cases} \tag{b}$$

In equation (a), "HJ_{it+1}" is the hierarchical jump which depends upon the previous year. Moreover, it constitutes low hierarchical jump and high hierarchical jumps which has been elaborated by equation (b), where "$n._pR$" is the number of positions in the rank of hierarchy. As "HJ_{it+1}" is the sum of "LHJ_{it}" and "HJ_{it}" which represents the lower and high hierarchical jumps (these are also dummy variables). Their values depend upon the first condition "$0 < I_{SSC}$" which explains that internal succession has been occurred. The second condition "$n_pR < M_L$" indicates. the number of position in a rank less than the middle level[4] represents the low hierarchical jump. Oppositely, if the hierarchical position in the rank is greater than middle level then it will be a high hierarchical jump in CEO succession (see, details in Appendix A).

Hierarchical Intensity

According to (Zhu et al., 2016) the hierarchical position among each company's profile indicates the authority of the upper echelon. So it means there must be a rule of seniority while allocating each board member on the hierarchical rank. In this scenario, if internal succession occurs forcefully, then many upper-rank board members are willing to be preferred via low hierarchical jumps. The reason behind this, they have been manoeuvring for the last many years to obtain the top level (Shen & Cannella Jr, 2002). It has been observed that the novel successor confronts many uncertainties during his early stage. The existent non CEOs (seniors) are the actual opponents who can aggravate the already miserable plight. In such circumstances, it is significant to analyse the impact of hierarchical jumps in CEO succession while expropriating the rights of senior board members on financial performance which has been defined as hierarchical intensity. Mathematically, it is written as

$$HInt_{it+1} = (N_pH)_{it} * (N_pS)_{it} \tag{c}$$

$$(N_pH)_{it} = \begin{cases} TN_pHif HJ > 0 \\ 0 \quad otherwise \end{cases}, \quad (N_pS)_{it} = \begin{cases} TN_pS \ if \quad HJ > 0 \\ 0 \quad otherwise \end{cases} \tag{d}$$

In equation (c) $(N_pH)_{it}$ is the number of positions in the hiechay which has been crossed by the successor and $(N_pS)_{it}$ is the number of seniors persons crossed which

already exist at the top ranks. There is a probability that $(N_P S)_{it}$ is "0"which means that the successor himself was the most senior member of the hierarchy (see details in Appendix A).

Control Variables

As Chinese firms are controlled via strict surveillance of government. This is why we have endorsed the most significant control variables (SOE and DUAL) following the extant literature (Jiang et al., 2013; Zhu et al., 2016, Shah et al.al 2019, Sarfraz et al.,2019). It has been evaluated that up to 2014 among listed firms on Shenzhen and Shanghai stock exchange, only 37.88% were SOE but capturing the 64.36% of market capitalization which signifies that most of non-SOE are small firms(Wong, 2016). SOE represents the state-owned enterprise which has been assigned 1 while 0, in case of non-SOE.

According to Chinese corporate structure, the CEO can capture two offices indicating the hegemonic and authoritative role which allows him to take decision steadfastly. In this regards, the existing literature (G. Chen, Firth, Gao, & Rui, 2006; Zhang & Qu, 2016) has included "Duality" as a dummy variable. Intuitively, it is quite significant to contemplate the characteristics of novel successor while being appointed through hierarchical jumps, we have included the dummy variables AGE and Degree in regressions following (Jiang et al., 2013; Manner, 2010; Zhu et al., 2016). Interestingly, following the new rules promulgated by CSRC, listed Chinese company requires a certain number of directors and executive (T. Chen, 2015) for enhancing the efficiency of corporate governance. Meanwhile, the positive impact of board on firms' growth has been analyzed by the prior research (Adams, Hermalin, & Weisbach, 2010; Jin et al., 2017; Lehn, Patro, & Zhao, 2009) So, following (López Iturriaga & Morrós Rodríguez, 2014) the numbers of board of directors are also included in panel regression. Lastly, "Firm age" (since the firm has been listed), "firm size" (taking log of total number of employees) "total asset" (taking logarithm) and "leverage" have also been included in panel regression following the extant literature (F. Hu & Leung, 2012; Jiang et al., 2013; Unsal, Hassan, & Zirek, 2016).

Empirical Models

$$PF_{i,t} = \beta_{0,t} + \beta_{1it} HJ_{it} + \beta_{2it} Dual_{it} + \beta_{3it} SOE_{it} + \beta_{4it} AGE_{it} + \beta_{5it} Degree_{it} + \beta_{it} Z_{it} + \varepsilon_{it} \quad (1)$$

$$PF_{i,t} = \beta_{0,t} + \beta_{1it} HHJ_{it} + \beta_{2it} HHJ_{it} + \beta_{3it} Dual_{it} + \beta_{4it} SOE_{it} + \beta_{5it} AGE_{it} + \beta_{6it} Degree_{it} + \beta_{it} Z_{it} + \varepsilon_{it} \quad (2)$$

$$PF_{i,t} = \beta_{0,t} + \beta_{1it} HInt_{it} + \beta_{2it} Dual_{it} + \beta_{3it} SOE_{it} + \beta_{4it} AGE_{it} + \beta_{5it} Degree_{it} + \beta_{it} Z_{it} + \varepsilon_{it} \quad (3)$$

Empirical Results

Table 1 represents the descriptive statistic of all variables revealing that seven variables are dummy variables that's why the value are small (especially main independent hierarchical jumps variable (see Table2, Table3 and Table4). Moreover, "Dual", "SOE" and "HInt" have greater observation (13501, 13642 and 13642 respectively) than other variables. Due to missing data, data has been synchronized by using STATA command "merge data".

Fixed effect panel regression has been preferred (via confirmation of Hausman test) The advantage of the fixed effect model is; it also captures the unobservable characteristics. The results of first-panel regression are represented by Table2 which indicates that hierarchical jumps are positively significant for all models ((1) to (6)). It also satisfies the first hypothesis. Moreover, it can be observed that hierarchical jump has brought2% increment in the performance which is quite significant not only for the high market capitalized firm but also useful for the newly born firms. In all columns "LNTA" (Total asset) is highly significant this means higher total assets firms will be more beneficial via the hierarchical jump.

Table 1: Descriptive Statistic

Variable	Obs	Mean	Std. Dev.	Min	Max
HJ	12469	0.084209	0.277712	0	1
LHJ	12468	0.029836	0.170143	0	1
HHJ	12465	0.055997	0.231663	0	1
EPS	13479	0.352219	0.775508	-6.85992	42.43205
ROA	13641	0.042034	1.034721	-48.3159	108.3657
ROI	12899	0.28954	0.629251	-0.8384	15.21132
LEV	13640	0.451735	0.634719	0.007969	63.97121
Degree	12470	0.026464	0.160516	0	1
AGE	12470	0.03753	0.190064	0	1
LNTA	13627	22.07624	1.486582	14.94164	30.81489
LNEMP	13636	7.590694	1.373216	1.609438	13.21468
NDIR	13641	8.72546	1.84488	0	22
Dual	13501	0.263166	0.440536	0	1
SOE	13642	0.439012	0.496285	0	1
HInt	13642	6.715877	44.56209	0	961

Table 1 represents descriptive statistic while indicating that seven variables are dummy variables. "HInt" represents the hierarchical intensity whose minimum value

is "0" which also indicates that in some cases the successor him selves was the most senior person. Moreover, "NDIR" represents the number of directors.

Table 2: The impact of Hierarchical Jump on Performance

	(1)	(2)	(3)	(4)	(5)
VARIABLES	ROA	ROA	ROA	ROI	ROI
HJ	0.0223*	0.0220*	0.0204**	0.109**	0.108**
	(0.0117)	(0.0117)	(0.0104)	(0.0488)	(0.0487)
EPS	0.132***	0.132***	0.132***	-0.00240	-0.00246
	(0.00499)	(0.00498)	(0.00498)	(0.0121)	(0.0122)
ROI_{t-1}				-0.315***	-0.313***
				(0.0138)	(0.0141)
ROA_{t-1}	0.0131***	0.0131***	0.0131***		
	(0.00202)	(0.00202)	(0.00202)		
Leverage	-0.527***	-0.527***	-0.527***	0.00975	0.00601
	(0.0172)	(0.0172)	(0.0172)	(0.0524)	(0.0528)
Degree	-0.00571	-0.00537		0.0330	0.0343
	(0.0168)	(0.0168)		(0.0638)	(0.0638)
AGE	0.0457***	0.0452***	0.0452***	-0.0495	-0.0483
	(0.0151)	(0.0151)	(0.0151)	(0.0562)	(0.0559)
LNTA	0.00647**	0.00652**	0.00648**	0.0478***	0.0466***
	(0.00301)	(0.00301)	(0.00301)	(0.0123)	(0.0124)
LNEMP	0.000583			-0.0327**	
	(0.00342)			(0.0140)	
Dual	-0.00211	-0.00222	-0.00212	-0.0369	-0.0343
	(0.00717)	(0.00717)	(0.00716)	(0.0331)	(0.0331)
SOE	-0.00919	-0.00941	-0.00929	0.0142	0.0158
	(0.00951)	(0.00951)	(0.00950)	(0.0297)	(0.0297)
NDIR		-0.00118			
		(0.00142)			
Constant	0.0818	0.0930	0.0861	-0.393	-0.616**
	(0.0705)	(0.0672)	(0.0667)	(0.287)	(0.270)
Observations	9,582	9,586	9,586	8,882	8,885
R-squared	0.250	0.250	0.250	0.099	0.098
Number of companies	2,787	2,787	2,787	2,579	2,579

Table 2 indicates that hierarchical jumps for both ROA and ROI are positively significant.

Additionally, LNTA (log of total assets) is significant, but NDIR (number of directors) has remained insignificant.

Table 3: The impact of Low and High hierarchical Jump on Performance

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROA	ROA	ROI	ROI	ROI
LHJ	0.00858	0.00861	0.00818	-0.00701	-0.00798	-0.0114
	(0.0129)	(0.0129)	(0.0128)	(0.0491)	(0.0491)	(0.0432)
HHJ	0.0183*	0.0182*	0.0172*	0.0934**	0.0925**	0.0897***
	(0.0101)	(0.0101)	(0.00997)	(0.0387)	(0.0386)	(0.0337)
EPS	0.0845***	0.0844***	0.0844***	-0.00540	-0.00546	-0.00545
	(0.00303)	(0.00303)	(0.00301)	(0.0114)	(0.0114)	(0.0114)
Leverage	-0.233***	-0.233***	-0.233***	-0.00607	-0.00412	-0.00411
	(0.00748)	(0.00748)	(0.00739)	(0.0280)	(0.0280)	(0.0280)
AGE	-0.0398***	-0.0393***	-0.0388***	-0.00775	-0.00686	
	(0.0123)	(0.0123)	(0.0121)	(0.0468)	(0.0468)	
Degree	0.000510	0.000778	0.00113	0.000902	0.00176	0.00225
	(0.0135)	(0.0135)	(0.0134)	(0.0516)	(0.0516)	(0.0515)
LNTA	0.000428	0.000306	0.000562	0.0408***	0.0399***	0.0399***
	(0.00239)	(0.00238)	(0.00236)	(0.00913)	(0.00911)	(0.00911)
LNEMP	-0.00338		-0.00327	-0.0170*		
	(0.00253)		(0.00248)	(0.00971)		
Dual	-0.00138	-0.00112		-0.0169	-0.0152	-0.0153
	(0.00563)	(0.00563)		(0.0219)	(0.0219)	(0.0219)
SOE	-0.00343	-0.00319	-0.00367	-0.00395	-0.00261	-0.00250
	(0.00698)	(0.00698)	(0.00685)	(0.0265)	(0.0265)	(0.0265)
NDIR		-0.00111			-0.00267	-0.00268
		(0.00109)			(0.00418)	(0.00418)
Constant	0.128**	0.112**	0.124**	-0.470**	-0.565***	-0.565***
	(0.0552)	(0.0530)	(0.0544)	(0.211)	(0.203)	(0.203)
Observations	12,180	12,186	12,311	11,566	11,572	11,572
R-squared	0.177	0.177	0.178	0.004	0.003	0.003
Number of companies	2,928	2,928	2,933	2,837	2,837	2,837

Table3 has revealed that High hierarchical jump is significant while the low hierarchical jump is insignificant. The results are robust.

Table 4: The impact of Low and High hierarchical Jump on Performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	ROA	ROA	ROA	ROI	ROI	ROI	ROI
HInt	8.72e-05*	8.64e-05*	8.72e-05*	0.000345*	0.000347*	0.000281*	0.000290*
	(4.95e-05)	(4.94e-05)	(4.95e-05)	(0.000182)	(0.000182)	(0.000154)	(0.000153)
ROI_{t-1}				-0.314***	-0.312***		
				(0.0121)	(0.0121)		
ROA_{t-1}	-0.0131***	-0.0131***	-0.0131***				
	(0.00202)	(0.00202)	(0.00202)				
EPS	0.132***	0.132***	0.132***	-0.00213	-0.00210	-0.00547	-0.00545
	(0.00499)	(0.00498)	(0.00499)	(0.0130)	(0.0130)	(0.0114)	(0.0114)
Leverage	-0.527***	-0.527***	-0.527***	0.00944	0.00585	-0.00256	-0.00511
	(0.0172)	(0.0172)	(0.0172)	(0.0613)	(0.0613)	(0.0280)	(0.0280)
Degree	0.00636	0.00660	0.00636	0.0955*	0.0954*	0.0293	
	(0.0150)	(0.0150)	(0.0150)	(0.0552)	(0.0552)	(0.0460)	
AGE	-0.0348***	-0.0345***	-0.0348***	0.00862	0.00867	0.0121	0.0184
	(0.0128)	(0.0128)	(0.0128)	(0.0471)	(0.0471)	(0.0396)	(0.0385)
Dual	-0.00185	-0.00201	-0.00185	-0.0361	-0.0318	-0.0102	-0.0159
	(0.00718)	(0.00720)	(0.00718)	(0.0272)	(0.0273)	(0.0220)	(0.0219)
SOE	-0.00923	-0.00924	-0.00923	0.0140	0.0155	-0.00319	-0.00401
	(0.00951)	(0.00951)	(0.00951)	(0.0351)	(0.0351)	(0.0265)	(0.0265)
LNTA	0.00645**	0.00645**	0.00645**	0.0476***	0.0464***	0.0396***	0.0406***
	(0.00301)	(0.00301)	(0.00301)	(0.0113)	(0.0113)	(0.00911)	(0.00913)
LNEMP	0.000647		0.000647	-0.0324**			-0.0171*
	(0.00342)		(0.00342)	(0.0128)			(0.00971)
NDIR		-0.000330			0.00510	0.00889	
		(0.00208)			(0.00784)	(0.00620)	
Constant	0.0824	0.0902	0.0824	-0.387	-0.653**	-0.653***	-0.465**
	(0.0705)	(0.0693)	(0.0705)	(0.264)	(0.259)	(0.209)	(0.211)
Observations	9,584	9,588	9,584	8,884	8,887	11,578	11,572
R-squared	0.250	0.250	0.250	0.099	0.098	0.003	0.003
Number of company	2,788	2,788	2,788	2,580	2,580	2,839	2,839

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4 indicates that hierarchical intensity is positively significant for both ROI and ROA. Additionally, LNTA is significant with a positive sign for all types of models. Table 3 has revealed that upper jump has unquestionably boosted the firm's performance clarifying second assumption H2. Significantly, the high hierarchical jump has enhanced the return on an asset by almost 1.8% whereas it has also enhanced the return on investment almost 9 %. Finally, this model is also robust. The results of table4 support the third hypothesis H3 in which hierarchical intensity is positively sig-

nificant for financial performance. It can be observed that the values of the coefficient are small for each model. The reason behind this is due to the interaction term (number of rank in hierarchy* the number of senior officials crossed) which illustrates that during some hierarchical jumps during hierarchical jumps the successor himself was the most senior person. So, in this case, a zero value has been allocated. In this model, the "total assets" has shown positive signs which shows that more prominent firms can enhance their growth through hierarchical jumps vigorously.

Robustness Check

The threat of endogeneity has been removed by applying instrumental 2sls regression technique. Following the extant literature (Shah et al., 2019 and Sarfraz et al., 2019), we have endorsed "THPOS" (total hierarchical position) as an instrumental variable which satisfies the conditions of correlation (see table 5). In table 5 the last row clarifies that total hierarchical positions (THPOS) are 70% related with "HJ" while with the performance it is only related .03and 3 % only which authenticates its reliability.

Table 6 indicates that results are reliable and without any concern of endogeneity. It can be judged that results in this table are almost the same verifying the authenticity of the previous results. Clearly, "HJ" and "HHJ" are highly significant as compared to previous results. Conclusively, the results of table 5, evaluate that hierarchical jumps are necessary for the financial growth of the firms especially it enhance the return on assets up to 50%. Comprehensively, high hierarchical jumps are a better choice for enhancing financial growth. Lastly, the hierarchical intensity is also highly significant which illustrate that even if senior board members are neglect during hierarchical jumps, but the momentum of financial performance remains undeterred.

Table 5: Correlation Matrix of Instrumental Variable

	ROI	**ROA**	**HJ**	**THPOS**
ROA	1.0000			
ROI	-0.0035	1.0000		
HJ	0.0034	0.0205	1.0000	
THPOS	0.0032	0.0316	0.7011	1.0000

Correlation matrix indicates the authenticity of instrumental variable

Table 6: Instrumental Regression (2sls)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROI	ROA	ROI	ROA	ROI
Fage	-0.418***	-0.00749	-0.411***	0.00456	-0.413***	-0.0103
	(0.0871)	(0.00586)	(0.0844)	(0.0215)	(0.0852)	(0.0118)
LHJ			0.534**	-0.00985		
			(0.209)	(0.0483)		
HHJ			0.382**	0.0829**		
			(0.160)	(0.0388)		
LNTA	0.362***	0.00467	0.346***	-0.00690	0.347***	0.00139
	(0.0817)	(0.00718)	(0.0771)	(0.0203)	(0.0776)	(0.0133)
LNEMP	0.159***	-0.0159***	0.138***	-0.0211**	0.142***	-0.0158**
	(0.0420)	(0.00559)	(0.0383)	(0.00941)	(0.0390)	(0.00725)
Degree	-0.494**	-0.0107	-0.447**	0.00602	-0.259	0.0762*
	(0.213)	(0.0429)	(0.204)	(0.0473)	(0.172)	(0.0454)
AGE	-0.0662	-0.0343	0.00464	-0.0266	0.187	-0.0230
	(0.172)	(0.0392)	(0.169)	(0.0393)	(0.148)	(0.0388)
Dual	-0.649***	0.00980	-0.567***	0.0292	-0.566***	0.00865
	(0.152)	(0.0167)	(0.135)	(0.0348)	(0.135)	(0.0260)
NDIR			0.125***	-0.00175	0.125***	
			(0.0288)	(0.00828)	(0.0290)	
SOE	1.578***	-0.0312	1.521***	-0.0734	1.524***	-0.0394
	(0.335)	(0.0243)	(0.318)	(0.0764)	(0.320)	(0.0448)
HJ	0.517***	0.0691**				
	(0.172)	(0.0313)				
EPS		-0.00427				-0.00472
		(0.00754)				(0.00836)
HInt					0.00243***	0.000372**
					(0.000754)	(0.000167)
ROI_{t-1}						-0.132***
						(0.0116)
Constant	-5.582***	0.404***	-5.947***	0.600	-5.965***	0.566**
	(1.342)	(0.128)	(1.390)	(0.370)	(1.400)	(0.228)
Observations	12,185	11,571	12,184	11,570	12,187	8,885

Table 6 has revealed that results are reliable due to the removal of endogeneity. The first two columns indicate hierarchical jump "HJ" is highly significant. Additionally, column 3rd and 4th have supported the second assumption (high hierarchical jump boost the firms; growth). Moreover, the last two columns have revealed that hierarchical intensity "HInt" is also highly significant.

Conclusion

Chinese companies are alleged to be strictly controlled via severe government ownership. Even some extant literature has evaluated that the incumbent CEOs have strong ties with political lobbying which is why there can be a high rate of hierarchical jumps (especially among SOEs). Despite mentioned above, the hierarchical jumps are inevitable for the enhancement of firms 'growth. Moreover, the appointment of CEO via high hierarchical jump must be preferred rather than any other category of succession. It also concludes that CEO's himself/herself responsible for being turned over forcefully because of his/her poor performance.

To encapsulate, while selecting the CEOs via hierarchical jumps, the following rules are necessary. First of all, he or she must be chosen among the low hierarchical rank. Secondly, no significance should be given to educational background or age of the novel appointee successor via hierarchical jumps. Lastly, it has also been suggested that while appointing CEO via high hierarchical jump, the senior board members should not be ignored otherwise the enhancement in the firms' performance will be minor.

Limitations

Firstly, the study has analysed the hierarchical jump occurring via internal succession, but performance-based hierarchical jumps among board members need to be explored for future study. Secondly, hierarchical jumps have been categorized into high level and low level. Future research can contemplate middle-level hierarchical jumps influencing the financial performance. Lastly, this study has evaluated the effect of hierarchical jump on firm's performance only. It would be interesting to analyse the impact of hierarchical jumps on the other attributes of firms.

NOTES

[1] In some Chinese firms the list of independent directors is not according to hierarchical rank (Zhu et al., 2016).

[2] Zhu et al., 2016 have analyzed that 90% of firms allocate vice chairman above the independent directors. So, it means, few firms have not allocated the board members according to proper seniority level.

[3] According to CSMAR (Chinese Stock Market and Accounting Research), there are 12 categories for the turnover of top management (rotation, retirement, expiration of the term, change of ownership, resignation, fire, health, personal reasons, improvement of corporate governance, criminalities, the end of the temporary appointment and natural turnover.

[4] SOE at central government is under the surveillance of Central Departments of Organization of Communist party of China which is responsible for appointing CEO (Jiang.Fet al. 2013).

REFERENCES

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. Journal of Economic Literature, 48(1), 58–107.

Adjaoud, F., Zeghal, D., & Andaleeb, S. (2007). The effect of the board's quality on performance: A study of Canadian firms. Corporate Governance: An International Review, 15(4), 623–635.

Bauer, R., Guenster, N., & Otten, R. (2004). Empirical evidence on corporate governance in Europe: The effect on stock returns, firm value and performance. Journal of Asset Management, 5(2), 91–104.

Chen, G., Firth, M., Gao, D. N., & Rui, O. M. (2006). Ownership structure, corporate governance, and fraud: Evidence from China. Journal of Corporate Finance, 12(3), 424–448.

Chen, T. (2015). Institutions, board structure, and corporate performance: Evidence from Chinese firms. Journal of Corporate Finance, 32, 217–237.

Conyon, M. J., & He, L. (2011). Executive compensation and corporate governance in China. Journal of Corporate Finance, 17(4), 1158–1175.

Daily, C. M., Certo, S. T., & Dalton, D. R. (2000). International experience in the executive suite: The path to prosperity? Strategic Management Journal, 21(4), 515–523.

Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. Strategic Management Journal, 33(9), 1072–1089.

Fitza, M. A. (2014). The use of variance decomposition in the investigation of CEO effects: How large must the CEO effect be to rule out chance? Strategic Management Journal, 35(12), 1839–1852.

Fowles, D. C. (1987). Application of a behavioral theory of motivation to the concepts of anxiety and impulsivity. Journal of Research in Personality. https://doi.org/10.1016/0092-6566(87)90030-4

Geletkanycz, M. A., & Boyd, B. K. (2011). CEO outside directorships and firm performance: A reconciliation of agency and embeddedness views. Academy of Management Journal, 54(2), 335–352.

Gerth, H., & Wolff, K. (1950). The Sociology of Georg Simmel. American Sociological Review. https://doi.org/10.2307/2086932

Guerrero-Villegas, J., Giráldez-Puig, P., Pérez-Calero Sánchez, L., & Hurtado-González, J. M. (2018). Ownership concentration and firm performance: the moderating effect of the monitoring and provision of resources board roles. Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad, 1–21.

Hambrick, D. C. (2007). Upper echelons theory: An update. Academy of Management Briarcliff Manor, NY 10510.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. Academy of Management Review, 9(2), 193–206.

Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. Journal of Business Finance & Accounting, 33(7-8), 1034–1062.

He, J., & Huang, Z. (2011). Board informal hierarchy and firm financial performance: Exploring a tacit structure guiding boardroom interactions. Academy of Management Journal, 54(6), 1119–1139.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind. Revised and expanded third edition. New York.

Hogg, M. A., & Terry, D. I. (2000). Social identity and self-categorization processes in organizational contexts. Academy of Management Review, 25(1), 121–140.

Hu, F., & Leung, S. C. M. (2012). Top management turnover, firm performance and government control: Evidence from China's listed state-owned enterprises. International Journal of Accounting, 47(2), 235–262. https://doi.org/10.1016/j.intacc.2012.03.006

Hu, H. W., Tam, O. K., & Tan, M. G.-S. (2010). Internal governance mechanisms and firm performance in China. Asia Pacific Journal of Management, 27(4), 727–749.

Jiang, F., Huang, J., & Kim, K. A. (2013). Appointments of outsiders as CEOs, state-owned enterprises, and firm performance: Evidence from China. Pacific-Basin Finance Journal, 23, 49–64.

Jin, L., Madison, K., Kraiczy, N. D., Kellermanns, F. W., Crook, T. R., & Xi, J. (2017). Entrepreneurial Team Composition Characteristics and New Venture Performance: A Meta-Analysis. Entrepreneurship Theory and Practice, 41(5), 743–771.

Lehn, K. M., Patro, S., & Zhao, M. (2009). Determinants of the size and composition of US corporate boards: 1935-2000. Financial Management, 38(4), 747–780.

Lo, A. W. Y., Wong, R. M. K., & Firth, M. (2010). Can corporate governance deter management from manipulating earnings? Evidence from related-party sales transactions in China. Journal of Corporate Finance, 16(2), 225–235.

López Iturriaga, F. J., & Morrós Rodríguez, I. (2014). Boards of directors and firm performance: the effect of multiple directorships. Spanish Journal of Finance and Accounting/Revista Espanola de Financiacion y Contabilidad, 43(2), 177–192.

Manner, M. H. (2010). The impact of CEO characteristics on corporate social performance. Journal of Business Ethics, 93(1), 53–72.

McGuinness, P. B., Vieito, J. P., & Wang, M. (2017). The role of board gender and foreign ownership in the CSR performance of Chinese listed firms. Journal of Corporate Finance, 42, 75–99.

McGuire, J., Dow, S., & Ibrahim, B. (2012). All in the family? Social performance and corporate governance in the family firm. Journal of Business Research, 65(11), 1643–1650.

Nanda, V., & Onal, B. (2016). Incentive contracting when boards have related industry expertise. Journal of Corporate Finance, 41, 1–22.

Ocasio, W. (1994). Political dynamics and the circulation of power: CEO succession in US industrial corporations, 1960-1990. Administrative Science Quarterly, 285–312.

Ou, A. Y., Waldman, D. A., & Peterson, S. J. (2018). Do humble CEOs matter? An examination of CEO humility and firm outcomes. Journal of Management, 44(3), 1147–1173.

Phillips, D. J., & Zuckerman, E. W. (2001). Middle-status conformity: Theoretical restatement and empirical demonstration in two markets. American Journal of Sociology, 107(2), 379–429.

Shen, W., & Cannella Jr, A. A. (2002). Power dynamics within top management and their impacts on CEO dismissal followed by inside succession. Academy of Management Journal, 45(6), 1195–1206.

Shen, W., & Lin, C. (2009). Firm profitability, state ownership, and top management turnover at the listed firms in China: A behavioral perspective. Corporate Governance: An International Review, 17(4), 443–456.

Shah, S. G. M., Tang, M., Sarfraz, M., & Fareed, Z. (2019). The aftermath of CEO succession via hierarchical jumps on firm performance and agency cost: Evidence from Chinese firms. Applied Economics Letters, 1-5.

Sarfraz, M., Qun, W., Shah, S. G. M., & Fareed, Z. (2019). Do Hierarchical Jumps in CEO Succession Invigorate Innovation? Evidence from Chinese Economy. Sustainability, 11(7), 2017.

Unsal, O., Hassan, M. K., & Zirek, D. (2016). Corporate lobbying, CEO political ideology and firm performance. Journal of Corporate Finance, 38, 126–149.

Wong, T. J. (2016). Corporate governance research on listed firms in China: Institutions, governance and accountability. Foundations and Trends® in Accounting, 9(4), 259–326.

Xu, N., Chen, Q., Xu, Y., & Chan, K. C. (2016). Political uncertainty and cash holdings: Evidence from China. Journal of Corporate Finance, 40, 276–295.

Zhai, J., & Wang, Y. (2016). Accounting information quality, governance efficiency and capital investment choice. China Journal of Accounting Research, 9(4), 251–266.

Zhang, Y., & Qu, H. (2016). The impact of ceo succession with gender change on firm performance and successor early departure: Evidence from China's publicly listed companies in 1997-2010. Academy of Management Journal, 59(5), 1845–1868. https://doi.org/10.5465/amj.2014.0176

Zhu, J., Ye, K., Tucker, J. W., & Chan, K. J. C. (2016). Board hierarchy, independent directors, and firm value: Evidence from China. Journal of Corporate Finance, 41, 262–279.

Appendix

This table has selected only one listed company (stock code 000688) for the years 2015-2016 in table 6.

Table 6: How to Formulate Hierarchical Jumps and Hierarchical Intensity

Company code	year	Name	Designation	Age	Education	Succession type
000688	2015	刘建民	Chairman(CEO)	63	Engineering	
000688	2015	杜俊魁 (du Zun)	Deputy Chairman	60	Economics	
000688	2015	董剑平	Deputy Chairman	48	Advanced Economics	
000688	2015	刘榕	Director	30		
000688	2015	张广龙	Director	48		
000688	2015	赵威 (Zhao Wei)	Director	50	Advanced Engineering	
000688	2015	姚新华	Independent Director	59	Lawyer	
000688	2015	冉来明	Independent Director	54		
000688	2015	郭喜明	Independent Director	47		
000688	2015	陈洁	Supervisor (who can chair the meeting)	52		
000688	2015	马慧	Supervisor	31		
000688	2015	王世鹏	Staff supervisor	35		
000688	2015	蔡亮	General Manager	46	Engineering	
000688	2015	夏勇	General Manager	48		
000688	2015	熊为民	Deputy GM	53		
000688	2015	营玉荣	Deputy GM	51	Advanced Engineering	
000688	2015	吴斌鸿	Inspector General for Finance Affair	47		
000688	2015	张健	Director	39		
000688	2015	杜寒阳	Supervisor	31		
000688	2016	赵威 (Zhao Wei)	Chairman (CEO)	51	Advanced Engineering	1= internal succession
000688	2016	杜俊魁	Deputy Chairman	61	Economics	
000688	2016	董剑平	Deputy Chairman	49		
000688	2016	刘榕	Director	31		
000688	2016	张广龙	Director	49		

This table indicates the firm (stock code 000688) for the 2015-2016 in which hierarchical jumps is occurred. As "Zhao Wei" is a director having a 6th position in the rank in 2015. However, when succession occurs, he has been appointed as a Chairman (CEO). He has crossed one senior person (vice Chairman Mr. Du Zun in 2nd place in the hierarchy).

Mathematical Formulas are explained as follows

$$LHJ_{it} = \begin{cases} 1 & if \quad 0 < I_{ssc}, n_p R < M_L \\ 0 & otherwise \end{cases}$$

In this table "M_L" is 9.5 (as total numbers of officials are 19) and "n_pR" is 6 (Zhao Wei has been elevated from the 6th position). So, it is a low hierarchical jump and its value is "1". Similarly, high jump can be analyzed (In this case high hierarchical jump is "0"). $HJ_{it+1} = \sum LHJ_{it} + HHJ_{it} = 1+0=1$ (which means hierarchical jumps is 1). Importantly, hierarchical jump is either low hierarchical or high hierarchical.

Additionally, hierarchical intensity can be analyzed as follows

$$HInt_{it+1} = (N_pH)_{it} * (N_pS)_{it}$$

$$(N_pH)_{it} = \begin{cases} TN_pH & if \ \ HJ > 0 \\ 0 & otherwise \end{cases}, \ (N_pS)_{it} = \begin{cases} TN_pS & if \ \ HJ > 0 \\ 0 & otherwise \end{cases}$$

In this table "$(N_pH)_{it}$" = 6 (where TN_pH means total number ofthe position in hierarchy whichis also 6) and "$(N_pS)_{it}$" = 1 (where TN_pS represents the total number of seniors are crossed as "Zhao Wei" has expropriated the right of only one senior person "Du Zun" whose age is 60). So, in this case "$HInt_{it+1}$" = 6 * 1 = 6.